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DYSPEPSIA:

ITS CAUSES, SYMPTOMS AND CURE.

BY

J. H. KELLOGG, M. D.,

MEMBER AMERICAN PUBLIC HEALTH ASSOCIATION, AMERICAN SOCIETY
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PREFACE.

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HAVING been so situated for several years as to have the medical care of a large number of dyspeptics, many of whom were cases of the most chronic sort, who had tried in vain all remedies which had been presented to them by numerous medical advisers, but without relief, we have found it necessary to give to this disease much careful study and a somewhat larger degree of attention than would have been required in a different field of practice. The result of our observations has been the conclusion that not only the common people but medical practitioners also are in general very deficient in knowledge on this subject. This is evidenced in the one case by the persistent continuance of habits which have in many instances been the sole cause of the production and perpetuation of the malady; and in the other by the fact that patients are rarely informed of the real cause of their disease, but are treated with remedies which can at most but palliate the symptoms, doing nothing toward removing the cause of the disease, and too frequently aggravating the patient's sufferings in the end.

We have had, also, abundant reason for being convinced that there is on the part of all classes, not excepting a large share of the average medical practitioners, a sad deficiency of information on the subject of dietetics. The relation of food to health, and especially the relations of different dieta-

ries to different morbid conditions of the digestive organs, are subjects concerning which there is the most lamentable ignorance. We have met numerous cases in which the disorders of digestion required nothing more than a change of diet, an adaptation of the food to the state of the digestive organs, to effect a cure.

The object of this little work is to point out as concisely as possible the symptoms of dyspepsia and to indicate the general principles upon which any mode of treatment, to be successful, must be based. The causes of dyspepsia are simply enumerated, without any explanation of the manner in which their adverse influence is exerted. The consideration of this subject, together with that of digestion in health, was precluded by the narrow limits of the work, much to the regret of the author, as these subjects are of first importance to a correct understanding of the disorders of digestion. They are, however, considered at length in the larger, bound edition of the work, to which we must refer those who are desirous of further information.

J. H. K.

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DYSPEPSIA.

OF all diseases or derangements of the human system, disorders of digestion are by far the most common. Indeed, it may be safely said that very few escape some personal knowledge of the tortures of indigestion—either acute or chronic—at least in this country, in which these maladies are so nearly universal that Americans have gained the reputation of being “a nation of dyspeptics.”

No other term in the English language expresses so much of misery and suffering as are comprehended in the one word, “*dyspepsia*.” Indigestion is, in fact, a synonym for every word expressing pain, physical or mental suffering, misery, despondency, despair, and every degree of wretchedness possible to humanity. Dyspepsia is a disease which deprives its victims of all the pleasures of living, and yet allows them to drag out year after year of misery until, worn out by incessant, unremittent suffering, death comes to their release. The very fact that it is not a speedily fatal disease, makes it to some all the more terrible; since, having tried in vain almost innumerable “sure cures” for the disease, they have

given up in hopeless despair, and long for death to end their sufferings.

Cholera is a fearful scourge; yellow fever is a terrible destroyer; scarlet fever and small-pox may well be dreaded as most calamitous imports into any community; but dyspepsia is a more stupendous evil than any or all of these, notwithstanding the fact that it rarely figures largely, if at all, in the mortuary tables. These reports are on this point very misleading, since they usually name only the immediate cause of death, not making apparent the fact that a large share of all chronic diseases have their beginning in disturbances of nutrition arising from impaired digestion. If the whole truth were shown respecting the influence of remote causes on the death rate, no doubt it would appear that the causes of indigestion are responsible for more deaths than all other causes combined.

It is evident that this is a malady that demands the most serious attention. This is especially seen when we recognize the fact that of all chronic ailments this is pre-eminent as being preventable by the employment of proper means. No disease is more dependent upon conditions which the individual can himself control than is this; neither is there any disease which more readily yields to the application of appropriate remedies when the necessary conditions are supplied. We have no hesitancy in asserting that every case of purely functional disease of the stomach can be cured, provided

the requisite conditions can be secured. This is not always easy to accomplish, however, since one of the obstacles to recovery may exist in the mind of the patient, and may be so thoroughly settled there as to make its removal impossible.

CAUSES OF DYSPEPSIA.

Two things are necessary to the healthy performance of the digestive function; viz., proper food, and a healthy condition of the organs directly and indirectly concerned in the process of digestion. Where these two requisites exist, the organs of digestion perform their work without in any way disturbing the other organs or functions. Indeed, normal digestion is performed unconsciously. An individual who is conscious of the working of his stomach, is suffering with a disordered state of that organ. The disorder may be of any degree, from that indicated by a slight feeling of weight or uneasiness occasioned by taking a small excess of food, to the most chronic case of indigestion, exhibiting all the most annoying symptoms of this formidable disease. We say *formidable* disease, not because it is often a fatal malady, but because of its obstinacy, which too often baffles for years the best efforts of those suffering from its debilitating effects. In most instances, unfortunately, the efforts of the patient and of his advisers, though earnest and persevering, are unavailing, because not well directed.

With this, as with all other diseases, the first step toward recovery lies in the discovery and removal of the causes of the disease. Fortunately for the sufferers from this disease, this can usually be done. It is very rare indeed that the causes of functional disorders are of such a character as to make their discovery impossible, though it is often a much more difficult task to effect their removal when they have been detected. Sometimes, it is true, the first stages of organic disease of the stomach exhibit symptoms identical with those of purely functional disease; but these rare cases are exceptions.

Before mentioning in detail the various causes which may be considered most active in occasioning disorders of digestion, it is important that we call attention to a general principle which applies to all cases of functional disease of the organs of digestion. In the study of digestion in health it is found that the two essential things are secretion and muscular action. So we find, correspondingly, that the two primary morbid conditions are defective secretion and disordered muscular action. The defect in the digestive secretions may be either in quantity or in quality, or may be both combined. The disordered muscular action may be either increased or diminished muscular activity; in the great majority of cases it is the latter condition. The special causes which will be mentioned are more or less active as agents productive of dyspep-

sia, just in proportion as they disturb these two essential functions of digestion, secretion and muscular action.

Errors in Diet.—There is no room to doubt that errors in diet, in manner of eating, or in quantity and quality of food, are by far the most active causes of indigestion in this country, as well as in most others. By asking a dyspeptic how he eats, what he eats, and when he eats, it is usually easy to discover the cause of his suffering; and by inducing him to form correct habits in these three particulars, a cure will be effected in nine cases out of ten.

Errors in the Manner of Eating.—Hasty eating; drinking at meals; hot drinks; cold drinks, ices, etc.; use of cold food; eating too frequently; eating between meals; irregularity of meals; eating when weary; violent exercise just after eating; sleeping soon after eating; late suppers; hot or cold bathing shortly before or soon after eating; overeating; eating too little; unseasonable diet, as the use of highly carbonaceous and heating foods in summer, as fat meats, lard, butter, and excessive quantities of sugar and other sweets.

Errors in Regard to the Quality of Food.—Man, like other animals, is made of what he eats; hence the German proverb is literally true, that “as a man eateth, so is he,” and we may well credit the assertion of an eminent author that the general tendency of thought in any nation may be deter-

mined by the character of the national diet. True as this principle is when applied to the body in general, it is especially true as referring to the stomach. No organ is so directly and so profoundly affected by the quality of the food as the stomach. Hence we may well consider with care the various ways in which the digestive organs may become impaired through defects in the quality of the food, which may be enumerated as follows:—

Bad cookery; fried food; pastry; poor bread; fat meats; “rich food”; too free use of sugar and sweet foods; soft food; too many varieties at a meal; condiments, as mustard, pepper, pepper-sauce, cinnamon, vinegar, excess of salt, etc.; pickles; preserves; tea and coffee; alcohol; tobacco; hard water; alkalies, as in the use of baking powders, soda, saleratus, ammonia, etc.; decayed food; adulterations exposing the stomach, as well as the whole system, to the deleterious action of lead, zinc, arsenic, copper, sulphuric acid, etc., etc.; use of indigestible substances, as of clay, chalk, slate, and sundry other substances equally innutritious and indigestible in character.

Causes not Directly Related to Food.—Pressure upon the stomach; mental worry, care, and anxiety; mental impressions; drugs; sexual abuses; disease of other organs; worms; inherited dyspepsia; electrical and other meteorological changes, and numerous other influences which are as yet but imperfectly understood.

SYMPTOMS OF DYSPEPSIA.

As nearly every disease may include among its symptoms some disorder of digestion, so dyspepsia may include in its symptoms many of those of nearly every disease that could be named. This is readily understood when we consider the fact that impairment of the digestion interferes with the nutrition of every organ of the body. Every part suffers, and of course the suffering organs express themselves in the various symptoms by which they manifest diseased or disordered functions. The particular prominent features in any given case will differ with individual peculiarities of constitution or temperament, which give prominence to some particular set of symptoms which may or may not refer to the stomach; it is usual, however, that there are certain symptoms which refer directly to the stomach, and which are generally understood as indicating stomach disease. The intensity of the symptoms manifested, varies from the slight uneasiness and sense of weight or fullness occasioned by a small excess in eating, to the most distressing and painful condition of the more aggravated forms of the disorder.

Classification of Indigestions.—Dyspepsia may be classified, first, as acute and chronic. One of the most important differences between an acute and a chronic case of indigestion is that acute dyspepsia

will cure itself in time, usually in a very short period, by the unaided efforts of nature; while a chronic case of the disease continues from bad to worse, or without material improvement, indefinitely. It is true of most chronic diseases that they show little tendency to come to a resolution by limitation. This is especially true of chronic dyspepsia.

Most cases of acute dyspepsia are the result of excess in eating, taking food at an unseasonable hour, or partaking of very unwholesome and indigestible substances, or the accidental ingestion of some highly irritating substance, as poisoned or decayed food, or some similar irritant. The majority of these cases recover spontaneously, and so quickly that they scarcely need further attention in this connection.

Chronic dyspepsia is generally much less active in its symptoms than is the acute form of the disease. It usually begins slowly, insidiously making its advances, and thus for a long time eluding observation, in many instances until well established. This is one reason why the diagnosis of the disease is often very obscure. Very frequently, it is overlooked for years, being mistaken for some other disease through the special prominence of certain symptoms, which, as before intimated, may simulate almost any disease.

Basing the classification of chronic dyspepsia upon the most prominent symptoms observed in

different cases of the disease, by far the greater part of the number may be included in the following five classes; viz., simple, acid, foul, painful, and nervous dyspepsia.

Each of the classes named has its characteristic symptoms, though any given case may combine the symptoms of one or of each of the different classes. After a brief consideration of the most important of the several symptoms relating to the stomach which appear in different phases of the disease, we will consider the special symptoms or groups of symptoms which characterize the different classes of dyspepsia mentioned.

Uneasiness at the Stomach.—One of the most common symptoms, and one which is frequently the first noticed by patients, is an uneasy sensation referred to the stomach, which is variously described as fullness, weight, tightness, oppression, heaviness, “a load on the stomach,” drawing, “working,” etc. There may or may not be tenderness on pressure at this stage. The uneasiness complained of is greatly increased by any excess in food—though occasioned by the usual amount—by eating too rapidly, by drinking at or soon after meals, and by eating articles of food which are difficult of digestion, as warm bread or biscuit and butter, pastry, fried food of any sort, pickles, etc. The essential difference between this condition and that resulting from eating to excess in health is that the symptoms described are produced by an

ordinary and proper amount of food, being only increased in severity by excess in quantity.

Flátulence.—This symptom indicates the presence of gas in the stomach or bowels, the character of which varies greatly, sometimes consisting of air which has been swallowed with the food in hasty eating. Sometimes, also, persons acquire the habit of swallowing air, as do horses, in which the habit is known as “cribbing.” The act requires quite a strong effort, yet is sometimes practiced constantly by hysterical patients, and also by some persons to relieve unpleasant sensations at the stomach. A small quantity of air is swallowed in the act of gulping, which usually occurs just before vomiting, and can be accomplished at will by most persons.

The usual cause of gaseous distention of the bowels, however, is the formation of gas within the bowels themselves, by decomposition of some elements of the food. Sometimes this occurs to an enormous extent, giving rise to belching and eructations, well compared to roaring in some extreme cases. In some cases, accompanied by hysterical manifestations, the accumulation of gas will be almost instantaneous.

When caused by fermentation, the gas usually consists chiefly of carbonic acid, from the destruction of starch and sugar, being both tasteless and odorless. At other times, it contains sulphureted hydrogen and other foul gases, from the decomposition of the albuminous and fatty elements of the food.

Intestinal flatulence, giving rise to rumbling in the bowels, or *borborygm*, has the same causes as flatulence of the stomach. The form of flatulence which affects chiefly the small intestine seems also to be in a great degree due to deficient secretion of bile. It affects chiefly weakly persons, those greatly debilitated by chronic rheumatism, especially, and more often women than men. It is frequently a cause of sleeplessness, and of unpleasant and erotic dreams, giving rise to nocturnal losses in persons whose sexual organs are in a weakened condition.

Flatulency of the colon, or large intestine, occasioning offensive gaseous discharges, arises from the decomposition of the retained contents of the bowel. It occurs most frequently as an accompaniment of constipation, and is due to deficient bile.

Fermentation.—Septic and even putrefactive changes may take place within the body as well as outside of it. According to the conclusions arrived at by careful scientific investigation, the process of fermentation consists of changes in organized substances induced by germs received from the air. There are various kinds of germs which induce different forms of fermentation. That known as the *torula*, or the yeast plant, excites the fermentation by means of which bread is raised, beer and wine fermented, etc. Through the action of yeast, sugar and starch are first converted into carbonic acid, alcohol, and water. It is this kind of fermentation which produces that form of flatulence

in which the stomach is distended with a tasteless and odorless gas. In the stomach, the process is precisely the same as in the baker's dough trough or the beer vats of the brewer. When digestion is promptly performed, the food is digested and absorbed before it has time to ferment; but when it is slow, either on account of deficient muscular action on the part of the stomach, or because of deficient or defective secretion of gastric juice, fermentation takes place before digestion is completed. The conditions of the food are peculiarly favorable for the occurrence of fermentation. The degrees of warmth and moisture are exactly those required. Fermentation is also favored by the presence of the saliva and of the mucus of the stomach. A solution of sugar in pure water will keep sweet for many hours; but if a small quantity of saliva be added to the solution, fermentation very quickly begins, as is shown by the rising of bubbles of gas to the surface. This change would always occur in the stomach were it not for the preservative influence of the gastric juice, which neutralizes the saliva, and to a considerable degree prevents fermentation. As before remarked, however, if digestion is delayed for any reason, then the germs taken in from the air with the food, quickly excite fermentative changes, and gases are developed, together with the other usual results.

Acidity.—A slight degree of fermentation produces only carbonic acid and a small quantity of

alcohol; but when the process continues, the alcohol is decomposed, acetic acid being formed. Every housewife is familiar with this fact from observing that bread allowed to ferment, or "rise," too long, becomes sour, an accident which bakers remedy by the addition of saleratus, an alkali, which neutralizes the acid. By the same process, wine, milk, and other fermentable substances, become sour. The juice of apples or other fruit, allowed to remain in a warm place, is thus converted into vinegar, which in this way becomes a simple solution of acetic acid in water, which is known as vinegar. In a manner precisely similar, the contents of the stomach may sour, the acetic acid being formed from the fermentation of the starch and sugar of the food.

Patients suffering with acidity often complain of having "too much gastric juice," or state that "the stomach is in a gastric condition," from the fact that by a reversed action of the muscles of the œsophagus some portions of the sour contents of the stomach are brought up into the mouth, the acid taste causing the patient to suppose that he has more gastric juice than is needed.

Heart-burn.—A burning or smarting sensation felt at the pit of the stomach or the lower end of the œsophagus, sometimes extending upward, and often accompanied by the rising into the mouth of a small quantity of a very acrid, irritating, pungent, foul-smelling liquid. The latest investigations on the subject seem to show that this symptom is due

to the formation in the stomach of butyric acid from the fermentation of some of the elements of food. The formation of this irritating substance is particularly favored by the presence in the stomach of fatty substances. It is this acid which gives to old cheese and very rancid butter their peculiar pungency. It is also its presence that the nauseating odor of vomited matters is due.

Water-brash—Pyrosis.—This is a symptom which commonly occurs when the stomach is empty of food, or nearly so; often before breakfast. A quantity of clear fluid, either slightly acid, alkaline, or neutral in taste, is thrown into the mouth from the stomach, varying in amount from less than a mouthful to half a pint or more. It is supposed to be caused by the accumulation of saliva in the stomach, which fails to absorb its fluid contents on account of inactivity. The expulsion of fluid may be accompanied by pain, or may be quite free from unpleasant sensation of any kind. It is a symptom which is almost universal among the Lapps and New Zealanders, and is also exceedingly prevalent in Scotland, where it seems to be due to the use of insufficiently cooked oatmeal.

Nausea.—This symptom is a peculiar sensation referred to the stomach, which is not easily described, as it is unlike anything else. It usually precedes the act of vomiting, though not always, and frequently exists without vomiting. It is derived from the Greek word *ναῦς*, meaning a ship,

being always a prominent symptom in seasickness. It commonly occurs, when habitual, in persons whose digestive organs are very weak.

Vomiting.—This is an expulsive act, in which the abdominal muscles and the diaphragm are chiefly active. As a symptom of acute dyspepsia, it is very common, but is much less so in chronic disorders of the digestive organs. When present, it usually indicates something in the stomach which should be ejected, being an effort of nature to defend the system from injury. Sometimes the presence of simple mucus, in excessive quantity, as in gastric catarrh, will give rise to vomiting. Vomiting also occurs very frequently in connection with whooping cough, chronic bronchitis, and consumption, being due to violent coughing. It is also sometimes induced, as is coughing, by the tickling sensation produced in the throat by a relaxed or elongated palate. Tickling the throat with the finger or a feather will in many persons excite vomiting, especially if there is the slightest degree of nausea. Some persons can produce the act of vomiting at will.

When violent vomiting continues for some considerable length of time, the vomited matter consists wholly of bile and mucus. The presence of bile leads many persons to suppose that bile is the cause of the vomiting, being evidence of “biliousness,” and having produced nausea by its presence in the stomach. This is an error. Bile is rarely present in the stomach, and then only from some

disturbance of the usual relations of the digestive functions. The violent efforts in vomiting finally extend to the duodenum, where the bile exists naturally, and causes it to be thrown upward into the stomach, whence it is expelled by vomiting. The first portions of bile vomited usually have a yellowish color, due to the fact that the alkaline bile is neutralized by the acid contents of the stomach. Afterward, when the bile becomes more than sufficient to neutralize the acid contents and secretions of the stomach, its natural greenish color appears.

Severe, protracted, and painful vomiting is a common symptom of organic disease of the stomach, as in cancer, ulcer, dilatation, contraction, or some other structural change.

Regurgitation.—Rumination is an act by which the food is returned to the mouth from the stomach by a reversal of the act by which food is swallowed, and without the violent efforts attending vomiting. In some animals, as the ox, sheep, goat, and others of the same species, all the food is returned to the mouth in this way, being re-chewed. In man, regurgitation does not occur in health, being caused by an irritable state of the mucous membrane of the stomach, which excites contraction in the organ and forces the food upward. Sometimes the act becomes more or less voluntary; but more often it is occasioned by a morbid condition of the stomach, and cannot be controlled by any effort of the will. Patients suffering in this way frequently complain of “spitting up their food.”

Gripes—Colic.—This symptom, sometimes called also “belly-ache,” is caused by irregular muscular contraction, or spasm, of the small intestine. The exciting cause may be distention with gas, or the presence of irritating matter in the bowels. Very common in patients subject to constipation.

Weight.—A symptom very often complained of by patients who may or may not have acidity, heart-burn, water-brash, and other local symptoms. It is sometimes referred to as “a constriction,” “a tightness,” or “oppression,” and is generally located at a point a little to the left of the median line, just beneath the lower border of the ribs. It indicates a catarrhal condition of the membrane of the stomach. The sense of fullness which it often occasions after eating is deceptive, being fully as great in many cases when the stomach is empty, or when only a small quantity of solid food or liquid has been taken. Persons suffering thus are usually very despondent, and it may be this fact that has given rise to the term *hypochondria*, which literally has reference to the region in which the sensation described is felt. It often accompanies *spermatorrhœa* and other forms of sexual weakness.

The “sinking sensation” at the stomach, of which many patients complain, though not identical with, is allied to, the sensation of weight described. It is probably due to a relaxed condition of the walls of the stomach.

Pain.—As a symptom of *dyspepsia*, pain may ap-

pear in the region of the stomach, or it may be referred to the spine, the chest, beneath the shoulder-blade or between the shoulders, or, in fact, to any part of the body. The most usual pain is a dull aching after meals at the pit of the stomach, which is increased on pressure either with the palm of the hand or with the tip of the finger. In some cases pain, though not severe, is constant, being no greater after a meal than when the stomach is empty, and often being apparently relieved by bland food, but coming on again as soon as the stomach is empty. This sort of pain is usually accompanied by a pain beneath the shoulder. It indicates congestion of the mucous membrane of the stomach, and being usually preceded by the sense of weight already described, is doubtless indicative of gastric catarrh, in many instances at least.

Sometimes pain felt in the stomach is wholly from increased sensibility of the mucous membrane. This condition is accompanied by abnormal sensibility elsewhere, in most cases, and commonly occurs in persons of hysterical tendencies, chiefly in young ladies. It not infrequently accompanies the condition rather vaguely known as "spinal irritation." We have nearly always found tenderness at the epigastrium present in cases in which there was marked tenderness of the dorsal spine.

A constant, wearing pain, though not severe, often becomes unbearable from its long continuance. It gives to a patient a haggard, despairing

look, which is also in part due to deprivation of sleep, another ill consequence of this variety of pain. The local pain is often aggravated by shooting pains emanating from the pit of the stomach and running into the limbs and other parts of the body. Patients frequently complain of a pain felt "clear through the body," starting from the pit of the stomach and terminating in a tender spot in the spine nearly opposite.

Pain accompanied by vomiting of blood is indicative of gastric ulcer or of some other severe structural trouble. Flatulence produces a pain peculiar to itself. Neuralgia of the stomach is one of the most severe pains an individual can experience, often coming on suddenly, and in many cases soon after eating, and by its intensity not infrequently causing fainting.

Soreness on pressure, with neuralgiac and other pains, also exists in the small intestines in some cases of dyspepsia, the conditions being essentially the same as those present in stomach pain.

We should not omit to remark in this connection that the various pains referred to are often mistaken for other diseases. The pain in the chest leads the patient and his friends to believe that he has consumption; and the emaciation occasioned by the defective nutrition seems to confirm this opinion. If the patient has a slight cough, the diagnosis is considered certain, and the patient is hurried off to Florida, to California, Colorado, or

some other locality supposed to be favorable for consumptives. By change of air, scenery, diet, increase of exercise, etc., the patient recovers, and the locality visited gets the credit of having cured a case of consumption, when the lungs have been sound from the first. If the patient stays at home, some quack or a worthless nostrum gets the credit, and every real consumptive who hears of the wonderful cure forthwith tries the same remedy, but of course without benefit. Such cases occur constantly, yet it must not be supposed that all pains in the chest come from the stomach. The same mistake is made in respect to other pains. In the region of the heart, it is supposed to be heart disease, especially if there is sympathetic palpitation of that organ. Pain between the shoulders is spinal disease. Occurring lower in the spine, it is thought to be kidney trouble, especially if there happens to be a sediment in the urine. Pain in the duodenum, occurring just beneath the lower border of the ribs on the right side, is "liver complaint," and must be treated by a plaster or a "liver pad"!

Biliousness.—What is termed biliousness, or "a bilious attack," is really acute gastric catarrh. From the long retention of undigested articles of food, the stomach becomes irritated to such a degree that nausea and vomiting are produced. At first, the matters vomited consist of undigested food in an advanced stage of decomposition, as indicated by the foul odor and nauseous taste. After vomit-

ing has continued for some time, bile and mucus are the principal matters expelled. The patient feels better soon, and in a few days is as well as ever. In these cases the difficulty is really in the stomach, and not in the liver, as many suppose, though such attacks may be accompanied by disturbance of the functions of the liver. The irritation extending down to the duodenum, its mucous membrane becomes so swollen that the opening of the duct from the liver is obstructed. This occasions retention of the bile, and absorption takes place, when the individual notices a jaundiced color of the skin, a dingy appearance of the white of the eye, etc. This is what gives to this symptom, or group of symptoms, the term of biliousness, when it is really gastric catarrh. One of the most common causes of acute gastric catarrh is "taking cold" after overeating or eating food difficult of digestion.

Appearance of the Tongue.—While the importance of the condition of the tongue as a symptom of dyspepsia is such as to make its mention necessary, it should be borne in mind that its indications have more distinct reference to the system in general than to the stomach in particular. A clean tongue, of natural color, appearance, and moisture, is a pretty sure indication of health. A feverish condition is readily shown by the tongue.

Unnatural redness of the tongue, most commonly at the tip and edges, sometimes with a strawberry appearance, indicates an irritable state

of the stomach. It is usually accompanied by soreness at the pit of the stomach, little appetite, and great thirst.

A yellowish or creamy coating on the tongue indicates an inactive state of the stomach and intestines, giving rise to a foul condition of the organs.

A white coat on the tongue indicates a feverish condition. This often appears in connection with unnatural redness at the edges and tip.

A broad, pale, flabby tongue indicates a weakened, debilitated condition of the digestion and of the whole system. A tongue of this sort usually exhibits indentations on its margin, formed by the teeth, owing to its flabby state.

A brown coat upon the tongue is very common in acute dyspepsia. It is often accompanied by a bad taste in the mouth, with unnatural dryness. Sometimes this is due to sleeping with the mouth open, by which the secretions and epithelium become dried to an unnatural extent.

Sometimes the tongue is coated in the middle, the edges being smooth and clean. This is due to the fact that the epithelium has become softened on the smooth portions, and has been rubbed off by the friction of the teeth. Clean spots are also due to lost epithelium, in many cases.

Transverse fissures of the tongue indicate a diseased state of the mucous membrane of the stomach.

Aphthæ.—In cases of acidity of the stomach, occasioning irritability of the organ, little pimples

often appear on the sides and under part of the tongue, and just within the corners of the mouth. After a short time, small white patches of lymph appear, which frequently leave very troublesome little ulcers when they disappear. These very annoying ulcers are positive evidence of stomach disorder, though the patient will often assert that he has no difficulty with his food, and never has any pain or inconvenience connected with the stomach.

Throat-Ail.—Congestion of the pharynx, with a granular condition of the mucous membrane, relaxation and elongation of the uvula, accompanied by a sense of constriction, tightness, dryness, tickling, and other symptoms, are not infrequent indications of stomach disorder. The patient is often much troubled with a tenacious mucus which he finds difficulty in dislodging. Sometimes the throat trouble amounts to real difficulty in swallowing.

What is known as “clergyman’s sore throat” is usually associated with disorders of digestion.

Sour Taste in the Mouth.—This symptom, not a very infrequent one, is due to an acid condition of the saliva, which not only renders it of little use as a digestive fluid, but ruins the teeth in addition, by destroying the enamel.

In anomalous cases the saliva has a sweetish taste. In inactive conditions of the liver, it is likely to be bitter, so that the patient complains constantly of a bitter taste in the mouth. Viscid-

ity of the saliva, accompanied by an unpleasant sense of heat in the mouth in the morning, is a common indication of derangement of digestion.

Constipation.—Though often an accompaniment of dyspepsia, this condition is not a constant one in that disease. There seems to be a quite general error on this point, since many patients confound the use of the term indigestion with constipation. We have often been told by patients, in answer to an inquiry respecting the state of the bowels, that their “digestion” was very regular, or very irregular, as the state of the bowels happened to be. A person may have very poor stomach digestion without any marked disturbance of the bowels; yet constipation or costiveness—some make a distinction between the two—is rarely present without disorder of some sort in the digestive apparatus.

Diarrhœa.—This also is as marked a symptom of dyspeptic conditions as the preceding, though less frequent. Whether constipation or looseness is present, depends on the particular form of indigestion. When the most prominent difficulty is slow digestion, constipation is usually present. In foul dyspepsia, the decomposition of the food gives rise to such a degree of irritation that diarrhœa is induced. Diarrhœa is also present in cases in which there is so great irritability of the mucous membrane that the food is hastened along without complete digestion. Not infrequently, the two conditions alternate, each

being occasioned by the other, the vital forces being too weak to maintain a healthy medium of activity.

The Feces.—Quite too little attention is paid to the character of the bowel discharges by physicians as well as by patients. In all cases of dyspepsia, they should be carefully and frequently examined. The feces should be well formed, and of moderate consistency. Ragged, unformed feces indicate some degree of irritability of the digestive track. Watery stools show deficient absorption, or too profuse secretion from the mucous membrane. Slimy discharges indicate a catarrhal condition. Small, pellet-like masses are indicative of constipation due to deranged function of the colon. If the discharges are unnaturally light in color, too little bile is present. An unnaturally dark color, with very offensive odor, often accompanies foul dyspepsia. The appearance of portions of undigested food, indicates great inactivity of the digestive organs. Microscopic examination is often extremely useful, as by this means it can be ascertained, in many cases, what particular element of the food may not be well digested. For example, if starch granules are found, the indigestion of starchy or farinaceous substances is indicated; if portions of undigested meat are discovered, difficulty in digesting animal food will be understood.

The examination of the fecal discharges also affords the only reliable evidence of worms, as by this means either the worms themselves or their

eggs may certainly be found if they are present in such numbers as to occasion mischief.

The Urine.—Examinations of the urine are also important; but little need be said on this point, as a reliable examination can be made only by a competent physician. A reddish or brick-dust sediment is very common in dyspepsia, together with other deposits. These are most often found after an unusually severe attack of indigestion. We mention the fact that deposits in the urine are frequent in this disease more particularly because those who are ignorant on the subject are often led, by the advice of quacks or otherwise, to take them as evidence of disease of the kidneys, of which they are not positive indications.

Dryness of the Skin.—A peculiar dry, rough condition of the skin is very common in dyspepsia, though not peculiar to the disease. In these cases, the natural secretion of the skin is greatly diminished. The patient will frequently complain that he never sweats.

In some forms of dyspepsia, the opposite condition is present, the skin being tawny and having a greasy feel. Occasionally it is unusually clear, pliable, and sensitive, sometimes being almost transparent. These cases usually occur in the class of nervous dyspeptics.

Dyspepsia must be recognized as the primary cause in many cases of eczema, urticaria, or nettle rash, and other skin affections. The use of partic-

ular articles of food will in certain individuals give rise to skin eruptions of various sorts, very soon after eating, the eruption being accompanied by marked evidences of indigestion.

Nervous Symptoms.—Most of the symptoms thus far mentioned have related directly to the digestive organs ; still other symptoms of importance remain to be noticed, which may be termed nervous symptoms, as they are indirectly occasioned by abnormal conditions of the stomach and bowels. These symptoms, notwithstanding that they arise wholly from disturbances of digestion, are often mistaken for distinct and serious diseases of the nervous system. There is no doubt that faulty digestion is one great cause of nervous disorders of many sorts, owing doubtless to the fact mentioned, symptoms at first temporary becoming chronic, and functional disturbances giving rise to organic diseases.

The nervous disorders which accompany dyspepsia are due to four causes : 1. To sympathetic disturbance of function, through the nervous connections of the stomach ; 2. To impaired nutrition of the nervous system, defective digestion occasioning a poor quality of blood ; 3. To the presence in the blood of the products of indigestion, imperfectly elaborated food, acetic and butyric acids, etc. ; 4. To retention of the excretions, owing to the inactive condition of the liver, skin, and bowels, resulting from impaired nutrition.

The various injurious elements mentioned, com-

ing in contact with delicate nerves already weakened by impaired nutrition, increase their irritability, and occasion disordered actions of almost every conceivable variety; from the slightest degree of mental disturbance, as shown in the little confusion of thought observed by the student, or the forgetfulness of engagements by the business man, to complete loss of mental control, even actual insanity; and from the slight nervousness familiarly known as fidgets, to the most alarming convulsive action.

One of the most common of all nervous symptoms is,

Headache.—Various forms of headache are among the most common symptoms of dyspepsia. In different cases, different parts of the head are affected, and in the same person at different times. The whole head may be affected, the temples throbbing, and feeling, as the patient sometimes says, “as though it would burst.” Again, the pain will be confined to the back or front of the head, to the top of the head, to the region of the ears, to the eyeballs, to the upper part of the neck, or will extend down between the shoulders. In many cases there is also tenderness of the part affected, it feeling sore on pressure.

When headache occurs during digestion, or soon after eating, it is usually of a dull, heavy character, often located in the front part of the head, accompanied by more or less confusion of thought, cold

feet, and sometimes dimness of vision. This form of headache often accompanies a sense of weight at the pit of the stomach.

The kind of headache which comes on the next day or several hours after taking an indigestible meal, is of a more severe character. It is commonly accompanied by pain and tenderness just below the ribs of the right side, in the region of the duodenum, which is probably the part chiefly affected.

Sick-Headache.—Another form of headache, quite distinct from that which accompanies a “bilious attack,” with which it is sometimes confounded, is usually confined to one side of the head, and is really of a neuralgiac character. This, together with numerous other forms of neuralgia, is due to disease of the digestive organs.

Disturbance of the Circulation.—Various disturbances of the circulation are very common in dyspepsia. Coldness of the hands and feet, or the opposite condition, especially at night, accompanied by an aggravating, burning sensation; unnatural heat in the head, often accompanied by fullness of the veins of the forehead and neck, showing intense congestion; palpitation of the heart, especially occasioned by excitement of any kind, and sometimes coming on suddenly in the night without apparent cause of that sort; intermittent action of the heart, with sudden sensations as of stopping, causing the patient to apprehend impending death; throbbing of the arteries in various parts of the body, this

being especially noticeable in irritable conditions of the stomach which are often accompanied by strong pulsation of the aorta, felt at the pit of the stomach, or lower in the abdomen ; sudden flushing of the face, with or without any slight mental excitement,—these are some of the more common symptoms of this class, some of which often occasion no little uneasiness on the part of the patient by exciting fears of organic disease of the heart, or some other serious malady, which he thinks may end his life at any moment.

“**Stomach Cough.**”—This popular term has really more significance than many physicians are accustomed to allow. It is a very common observation that the stomach and lungs sympathetically affect each other. Most cases of consumption and of chronic bronchitis are accompanied by stomach difficulty ; and, on the other hand, there are many cases in which dyspeptic conditions are accompanied by a troublesome cough, usually of a dry, hacking character, without expectoration. In not a few of these cases the cough is due to an elongated palate, or to congestion of the pharynx. Most of the remarkable consumptive cures are cases of this sort. It must not be supposed, however, that every hacking cough is due to disease of the stomach. Many real consumptives make the mistake of supposing that their cough is wholly due to disease of the stomach, and by procrastination lose their only chance for recovery. A

cough accompanied by copious expectoration, or by a rapid pulse and night sweats, is never a "stomach cough."

Difficulty of breathing and a sense of suffocation are among the symptoms of dyspepsia in which the lungs are involved. The difficulty may arise from pressure against the diaphragm by a distended stomach, or through nervous influence.

Nervousness.—Many dyspeptics suffer more or less with an indescribable uneasiness, sometimes termed "fidgets." The limbs are chiefly affected. The patient finds it impossible to sit still. The lower limbs, especially, are kept in almost constant motion. Such persons find the confinement of sitting in church almost unendurable. This difficulty is especially troublesome in the afternoon and at night. It is often accompanied by peculiar sensations in the limbs, especially when sitting or lying, as "crawling," "prickling," "numbness," etc., which "traveling doctors" call attention to as indications of "a tendency to paralysis," but which merely indicate a weakened circulation and badly nourished nerves.

An allied, and very singular sensation is that of motion. The patient, if very nervous—and this is especially the case with young women—will often complain of feeling as though he were being carried, involuntarily, to different parts of the room, as from one corner to another, to the ceiling, to the window, or even into another room. Patients some-

times complain, also, of feeling as though some portion of the body were larger than natural ; as, when lying down, the sensation will be that a limb, or a hand, or the head is immensely large. The delusion vanishes, however, upon the patient's attempting to move the particular part affected.

Vertigo.—Giddiness, light-headedness, sensations of falling, are common symptoms of stomach disorders, being due to anæmia of the brain, or deficiency of blood, as is the case in syncope, or to pressure of gas in the stomach. Persons so troubled often live in constant fear of apoplexy ; but there is much less danger of such an accident than is generally apprehended. The great danger is from impaired nutrition from the defects in digestion.

Disturbance of Sight, Hearing, etc.—Nothing is more common in this disease than disturbances of vision and of the various other special senses. Dimness of vision, sensitiveness to light, deafness, ringing in the ears, unusual sensitiveness to noise, etc., occur in many cases. Not infrequently the patient sees imaginary forms of various sorts. Sometimes the intolerance of light is so very great that the patient is confined in a dark room. This is more common in women than in men. Often the extreme degree of apparent sensitiveness is more imaginary than real.

The appearance of black or bright spots of various shapes and sizes, especially noted when stooping over, is another common symptom.

Unnatural thirst, perversions of taste, peculiar sensitiveness of various parts of the body, are also symptoms worthy of being noted.

Nervous Diseases.—Functional nervous disorders, as hysteria, epilepsy, and even temporary paralysis, often originate in dyspepsia. Dr. Chambers, an eminent English physician, asserts that nine cases out of ten of hysteria are due to indigestion. This statement we have found abundantly confirmed by our own observation. In the treatment of a good many cases of epilepsy, we have observed, in nearly every case, tenderness at the pit of the stomach and a foul tongue. In some cases, no doubt, the stomach disease is secondary; but in many, at least, we believe that the latter difficulty is the primary affection; and the failure to recognize this fact is one reason that causes this malady to be looked upon as so difficult of cure. In many instances the remedy given to cure the disease is of a character to defeat the end desired, by deranging the stomach.

Unusual Drowsiness.—This symptom occurs most often after eating, though it sometimes continues much of the time. An hour or two after eating, the patient feels an almost irresistible disposition to sleep. The sense of weariness and lassitude is sometimes so great that it is with difficulty that the patient can be induced to make an attempt to exercise. If he will do so, however, he feels much better than if he yields to his feelings and sleeps.

Exercise dispels the exhausted feeling, which is not fatigue ; while if the patient allows himself to sleep, he awakes unrefreshed, and really worse than when he lay down.

Sleeplessness.—This condition, quite the opposite of the preceding, is equally common, and often exists in the same individual, the person being very sleepy soon after eating, but wakeful at night. The patient is not kept awake by pain, but by simple nervousness, or by a sense of weight at the stomach, by morbid anxiety or fears, or by burning of the feet and hands, or some similar cause. If sleep comes, it is not sound, but with troubled dreams, from which he awakes in the morning unrested and unrefreshed. These patients usually feel best in the afternoon and early evening.

Mental Disorders.—Until of late years it was not known that dyspepsia could be recognized by the mental and nervous symptoms alone ; and even yet the fact is not as well understood as it should be. It is thoroughly established, however, at the present time, that this is the case, and also that in cases in which the mental and nervous symptoms are most prominent, those which point directly to the digestive organs are the fewest and most obscure. Hypochondria has long been associated with indigestion, though often attributed to the liver. Cases of so-called softening of the brain in students, clergymen, and other mental workers, with “cerebral hyperæmia,” or chronic congestion of the brain, are

nearly always cases of indigestion, resulting in defective nutrition of the nervous system. Gloomy apprehensions, forebodings, peevishness, perversity of disposition, religious despair, confusion of thought, loss of memory, absent-mindedness, and many other forms of mental disturbance, are justly attributable to this cause, and disappear upon its removal.

The failure to recognize this class of cases, has consigned many men of ability and influence to the walls of an insane asylum with no hope of recovery, who might have been saved to the world, their families, and themselves, by a judicious course of treatment aimed in the right direction. Hundreds of nervous females have had their spines blistered, and burned, and cauterized, for some supposed obscure nervous trouble, in vain, enduring years of torture, all without benefit, who might be made well by a few months of intelligent treatment for impaired digestion. A good many of both classes of invalids having come under our care, some of whom had been inmates of insane asylums for years without getting better, while others had baffled the skill of eminent neurologists, we are convinced that much more attention ought to be paid to this class of dyspeptic cases, and hence we have dwelt at considerable length upon it.

TREATMENT OF DYSPEPSIA.

As dyspepsia is not usually a fatal disease, thousands of people allow themselves to suffer from its pains and inconveniences for years without making serious efforts to recover. If anything is done, it is most likely to be a trial of some quack nostrum advertised on the fence or heralded in the daily newspaper as a "sure cure" for indigestion, its merits certified by a long list of fictitious or purchased testimonials. Every effort of this sort, of course, makes the disease worse in the end, even though there may be apparent temporary relief. Failing in several attempts, perhaps, the sufferer settles down in despair to the melancholy conclusion that he must remain as he is, that his malady is incurable; and so he lives along in a wretched way until consumption, that dread disease which often follows close on the heels of the hydra-headed malady we are considering, claims him as a victim and ends his misery.

The importance of giving to the treatment of this disease most serious attention is further seen by the fact that many organic affections which when once well established are impossible to cure, have their origin, in many cases, in indigestion. This is undoubtedly true of tuberculous degeneration of the lungs and other parts, together with other degenerative changes. The same may also be said of various nervous affections. This accounts, in part at least, for the almost

constant association of impaired digestion with consumption, and with various organic affections of the liver, kidneys, and other organs. In most of these cases, the best, and often the only hope for a cure, lies in the treatment and cure of the digestive disorder; and, without doubt, if this could be accomplished sufficiently early, many cases of hopeless organic disease of the lungs and other organs might be prevented altogether.

The Road to Health.—The dyspeptic, of all invalids, needs especially to enter upon the work of getting well with a determination to succeed, and resolved to do all in his power to accomplish that end. Though an intelligent physician can do much, the patient himself can do vastly more for himself than any one can do for him. It belongs to him very largely to make his conditions favorable for recovery. Indeed, he alone can control many of the conditions essential for the happy termination of his sufferings. If the dyspeptic would recover, he must seek carefully for each one of the causes of his disease, and carefully remove them. It is of no use to hope for recovery without doing this. If the cause is in the manner of eating, let him take care to eat properly. If he has erred in eating too much, or in eating improper articles of food, let him make a thorough reform in this regard. If the difficulty has been in overwork, too much anxiety, too little time to digest, or too sedentary habits, he must get away from his care,

his business, his writing-desk, and seek health in out-of-door exercise, coupled with happy, cheerful associations. The careworn, burdened mother must have relief from the tedium of her routine life. A journey, a visit to a friend, or some other means of diversion, must be adopted. Whatever the cause has been, it must be removed. No medicine known, no matter how potent, nor how skillful its administration, can antidote the effects of the transgression of physical laws. Nature is inexorable. She demands obedience, and will not be put off with any sort of subterfuge.

To the great army of dyspeptics, to which almost the whole American nation belong, and a large proportion of other nationalities, we would say, You can get well if you wish to, if you care enough about health to make the effort, and we are about to point out the way ; but the man who has been a dyspeptic for years must not expect to get well in a week, nor in a month. He must be willing to persevere in his efforts after he has started in the right direction, never relaxing for a moment his determination to get well. He must also make up his mind to deny his appetite of all things harmful, to wage a constant warfare against the things which have made him ill.

It must not be supposed that any one plan will accomplish the result desired in all cases. There are various forms of dyspepsia, each of which requires special management, though the general

principles laid down apply to all classes of the disease. We will now point out with greater definiteness than heretofore the distinguishing features of the several forms of the disease, and the general line of regimen and treatment necessary to effect a cure. The suggestions made, if thoroughly understood and efficiently applied, cannot fail to do much good.

Slow Digestion.—This, the simplest and most common form of the malady, is sometimes called simple dyspepsia. It is more common in men than in women, and especially affects sedentary persons, and those nervous individuals who eat rapidly, swallowing their food without proper mastication. It is also common in persons whose teeth are defective. Its immediate cause is deficient activity of the muscular walls of the stomach and intestines, and also deficient quantity or quality of gastric juice. The symptoms are much the same as those which follow the taking of an excess of food, but are felt when only a moderate amount has been taken. An hour or two after eating, a sensation of weight and oppression is felt. The discomfort continues for some hours, gradually wearing off before the next meal. The appetite is usually pretty good, but often will not be prepared for the reception of food at meal-time, as the work of digesting the previous meal has not yet been accomplished. Sometimes there is considerable flatulence of the stomach, the eructations being tasteless, however, never offensive; often pain between the shoulders, or

beneath one shoulder-blade, and not infrequently in the region of the heart. Palpitation of the heart often occurs in the night, causing great alarm on the part of the patient and his friends, who entertain fears of sudden death. Sleep is disturbed and unrefreshing. The tongue is often foul in the morning, with a bad taste in the mouth. All the symptoms mentioned are greatly exaggerated by a late supper, or by any unusual excess in quantity or quality of food. The bowels are usually constipated, but may be regular. When the difficulty has been long continued, there will be observed a marked disposition to sleep after meals, or unnatural sleepiness at other times, and a decided loss of natural vivacity and energy.

Acid Dyspepsia.—This form of indigestion is that in which the slowness of digestion is such that the food undergoes fermentation, forming acids which irritate the stomach and give rise to the same symptoms, much exaggerated, which have been mentioned as attending slowness of digestion, with several others, the principal of which are heart-burn, regurgitation of intensely sour liquid from the stomach, acid eructations, a white tongue, frequently with transverse fissures, often flabby and indented at the edges, acid saliva, causing decay of the teeth, bowels likely to be either constipated or unnaturally loose, grinding of the teeth at night, and a reddish sediment in the urine. No one patient presents all of these symptoms, but more or less of

them. There is quite likely also to be pain at the pit of the stomach, with soreness on pressure.

On account of the extreme slowness of digestion, farinaceous foods always aggravate this form of dyspepsia. Starchy food, sugar, fruits, and especially vegetables of all kinds, cause great increase of acidity and heart-burn. In some cases, even bread and all sorts of preparations from grains will disagree. Sugar, or any food containing it, will give rise to great distress. A meal consisting of animal food almost entirely, may be digested without difficulty, though milk frequently sours.

The digestion being very slow, portions of fermenting food remain in the stomach from one meal to another, so that acidity becomes habitual.

Patients suffering with this form of dyspepsia are usually very thin, and bloodless. Occasionally, however, we meet a case of the opposite kind, in which there is an abundance of tissue, though of a loose, flabby texture. Women suffer from acidity more than men.

Bilious Dyspepsia.—The term “bilious” is used to distinguish this form of indigestion, not because either the liver or the bile is the immediate cause of it, but because of the bilious vomiting and jaundiced appearance of the skin which usually occur in this class of cases. This is what is generally known as “biliousness.” Acute dyspepsia of the same sort is termed “a bilious attack.” Women, tailors, shoemakers, and sedentary persons generally, are particularly subject to this form.

As in acid dyspepsia, this form of indigestion differs from slow digestion chiefly in the exaggeration of the morbid conditions present in that disease. Digestion being still slower than in acid dyspepsia, the characteristic symptoms occur more remote from the time of eating. The usual time for the appearance of the most marked symptoms is the morning, before breakfast. Headache, great flatulence, a very foul tongue, a bitter taste in the mouth, with nausea and finally vomiting of undigested and partially decayed food in a very foul state, indicate the inactivity of the digestive organs present in this form of dyspepsia. When vomiting is continued, bile is generally expelled, the duodenum becoming affected and taking part in the expulsive action. Diarrhœa often accompanies, and in some cases replaces, the vomiting.

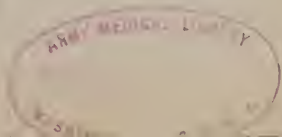
Owing to this thorough clearing out of the stomach and bowels, these attacks do not occur at very brief intervals. They are often periodical, however, recurring sometimes as often as once or twice a week, and again not more often than once in two to four weeks.

In addition to the more important symptoms mentioned may be noted headache, often of a "splitting" or "throbbing" character, fetid eructations, and usually severe pain in the eyes. This is not real sick headache, however, as it is often termed, that difficulty being of a neuralgiac character and affecting only one side of the head at a time.

Farinaceous foods give much less trouble than meats, especially fat meats. Vegetables eaten with fat, pastry, oily nuts, meat which has been kept too long, sometimes eggs, especially those not perfectly fresh, with albuminous and fatty foods generally, increase the symptoms peculiar to bilious dyspepsia, and bring on the attacks. Sufferers from this difficulty often make themselves vastly worse by the use of purgative medicines.

Painful Dyspepsia.—The chief characteristic of this disease is tenderness at the pit of the stomach, just at the lower end of the sternum, usually, but sometimes affecting other portions of the stomach and also the duodenum, the pain in the latter region being usually mistaken for some affection of the liver. We have met a few cases in which the sensibility extended to other parts of the small intestine.

The tenderness described is almost always accompanied by a very unpleasant sensation at the epigastrium or extending up beneath the sternum, which the patient describes as a “tearing,” “burning,” “rasping,” “gnawing” pain, which comes on soon after taking food. This pain may be due to a morbid sensibility of the mucous membrane, or to a congested state usually called chronic inflammation of the stomach, or chronic gastritis, accompanied by a catarrhal secretion resembling that from any other mucous membrane in a catarrhal condition. When the pain is due to morbid sensibility of the stomach, it usually ceases when digestion is completed.



When due to congestion, it is continuous, perhaps being in some degree relieved by taking a moderate amount of bland food, and of a character which the patient describes as a "sinking," "all-gone" feeling, when the stomach is empty.

The pain is often accompanied by throbbing of the aorta, felt at the pit of the stomach or below.

Not infrequently the congestion to which this pain is sometimes due is caused by compression of the abdominal organs, obstructing free circulation. Hence, women who wear corsets are very liable to be affected by it, though they will rarely admit the cause, and still more rarely can be induced to remove it. As a pithy writer once said, women have a strong "won't," which they sometimes oppose very strongly to all arguments, no matter how irresistible may be the logic.

Nervous Dyspepsia.—The mutual sympathy between the stomach and the brain is very marked. Disease of the stomach may be produced by mental disorders, and various mental and nervous affections may arise from disease of the stomach. As before remarked, cases sometimes occur in which the most prominent symptoms of dyspepsia manifest themselves through the nervous system, by which alone the disease may be made out. Such cases are included under this head.

All of the symptoms previously enumerated under the head of mental and nervous disturbances, are observed in these cases. The stomach symp-

toms of indigestion are sometimes so very slight that they can hardly be distinguished ; yet there is undoubtedly a serious fault in these cases in the elaboration of the food. The process of digestion is left incomplete, and the blood becomes full of crude, unelaborated material, which not only does not impart to the tissues new life and vigor, but is a direct source of irritation. The brain, being the most sensitive part of the nervous system, of course suffers most, and hence we have abundant cause for the mental depression, unbalanced mental action, confusion of ideas, vacillation of judgment, perversity of disposition, and other kindred disturbances from which the nervous dyspeptic suffers.

Many persons, finding themselves in this wretched state, and not realizing the influence of physical conditions upon the mind, fall into hopeless despair, even when no outbreking sin or intentionally wrong act has been committed. At first, there will be observed simply an exaggeration of real difficulties or misfortunes ; but after a time the individual settles into a state of gloom, despondency, and mental depression in which he will suffer with troubles that are purely imaginary. Of these hypochondriacal persons, Dr. Cullen gave a very graphic description, which we quote as follows :—

“ In certain persons there is a state of mind distinguished by the following circumstances : a languor, a listlessness or want of resolution with reference to all undertakings ; a disposition to serious-

ness, sadness, and timidity as to all future events ; an apprehension of the worst or most unhappy state of them ; and therefore, often upon slight grounds, an apprehension of great evil. Such persons are particularly attentive to the state of their own health, to every smallest change of feeling in their bodies ; and from any unusual feeling, perhaps of the slightest kind, they apprehend great danger, and even death itself. In respect to all these feelings and apprehensions, there is commonly the most obstinate belief and persuasion."

Nervous dyspeptics often suffer much in mind from a morbid sensitiveness. They imagine themselves the subject of criticism or ridicule, become morose and irritable, and exceedingly unhappy. Occasionally they find themselves haunted with evil thoughts, with almost irresistible impulses to commit improper or criminal acts, as blasphemy, suicide, etc. They are almost always certain to imagine themselves the subjects of many different diseases, usually of some incurable malady.

It is observed that mental disorders of the character described are often the result of intestinal dyspepsia, a form of the disease in which the local symptoms are less prominent than are those which relate to the stomach, but equally grave.

DIET AND REGIMEN.

In the treatment of this disease, proper diet and regimen are of first importance. Drugs hold a very subordinate place, in many cases being entirely unnecessary, provided proper hygienic conditions are secured, these being far more important than all other measures combined. The diet is of special importance. It is necessary, however, that it should be most carefully adapted to the wants of each individual case, as nothing could be more true than the adage that "what is one man's meat is another's poison" when referring to cases of dyspepsia. The common plan of recommending some special dietary to all dyspeptics indiscriminately is a most pernicious one. We hear much of the grape cure, the beef cure, the fat cure, the cod-liver-oil cure, the milk and sundry other special diet cures, of dyspepsia, as well as the vegetarian cure. Each of these diets may be of special service to some special case, but all are totally unfitted for all cases alike. We have seen many persons become dyspeptics by the adoption of a vegetarian diet; but we have seen many more cured by exchanging a diet of fat meats, sweets, etc., for a plain diet of fruits, grains, and vegetables.

It is not an easy matter to induce individuals suffering with dyspepsia to deny the demands of appetite. In many cases, the will is weakened by long-continued disease, and the appetite is perverted,

so that the patient loses self-control, and thus himself stands as the most difficult obstacle in the way of his recovery. It must be insisted, however, that the directions to be given shall be followed implicitly. In no other way can a bad dyspeptic hope for recovery. All but one or two requirements may be conformed to, but the failure in one particular may be sufficient to make all other efforts useless.

Although, as before remarked, there is no such thing as a universal diet for dyspeptics, there are certain articles of diet that must be discarded by all persons who have a weak digestion, and certain dietetic rules which must be conformed to by all. To the most important of these we will now call attention.

1. Eat slowly, masticating the food very thoroughly, even more so, if possible, than is required in health. The more time the food spends in the mouth, the less it will spend in the stomach.

2. Avoid drinking at meals; at most, take a few sips of warm drink at the close of the meal, if the food is very dry in character.

3. In general, dyspeptic stomachs manage dry food better than that containing much fluid.

4. Eat neither very hot nor cold food. The best temperature is about that of the body. Avoid exposure to cold after eating.

5. Be careful to avoid excess in eating. Eat no more than the wants of the system require. Sometimes less than is really needed must be taken when

digestion is very weak. Strength depends not on what is eaten, but on what is digested.

6. Never take violent exercise of any sort, either mental or physical, either just before or just after a meal. It is not good to sleep immediately after eating, nor within four hours of a meal.

7. Never eat more than three times a day, and make the last meal very light. For many dyspeptics, two meals are better than more.

8. Never eat a morsel of any sort between meals.

9. Never eat when very tired, whether exhausted from mental or physical labor.

10. Never eat when the mind is worried or the temper ruffled, if possible to avoid doing so.

11. Eat only food that is easy of digestion, avoiding complicated and indigestible dishes, and taking but one to three kinds at a meal.

12. Most persons will be benefited by the use of oatmeal, wheat meal, or graham flour, cracked wheat, and other whole-grain preparations, though many will find it necessary to avoid vegetables, especially when fruits are taken.

As an aid in the selection of articles of diet we present tables of foods classified according to their digestibility, giving first a table of

Articles Easy of Digestion.—The following articles are readily digested by a healthy stomach, and can be digested with comparative ease by most dyspeptics:—

ANIMAL FOODS.

Raw white of egg, beaten to a froth.	Mutton, broiled.
Beef tea, free from fat.	Venison steak, broiled.
Raw whole egg, beaten.	Chicken, especially the white
Milk, fresh and warm.	Rabbit. [parts.
Fresh eggs, soft boiled.	Fresh trout, and most fresh fish which are not oily.

VEGETABLE FOODS.

Stale bread.	Cauliflower.
Graham rolls, made without yeast or soda.	Asparagus, if very tender.
Rice, well boiled or steamed.	French beans.
Tapioca, sago, corn-starch.	Baked sweet or subacid apples.
Oatmeal porridge, eaten with dry toast.	Strawberries and whortleberries.
Graham mush or crushed wheat.	Grapes, without skins or seeds.
	Oranges and bananas.

Articles not Easy of Digestion.—The following list includes the common articles of food which require a considerable degree of vigor on the part of the digestive organs, and must be avoided by all bad dyspeptics :—

ANIMAL FOODS.

Animal soups of all sorts.	Codfish.
Beef.	Oysters, raw.
Lamb.	Butter.
Turkey, duck, pigeon.	All sorts of roast meats.

VEGETABLE FOODS.

Potatoes.	Raisins and most dried fruits.
Turnips.	Apples.
Cabbage.	Peaches.
Tomatoes.	Plums.
Peas.	Cherries.
Beans.	Pineapple.

VEGETABLE FOODS. (Continued.)

Beets.	Currants.
Carrots.	Gooseberries.
Spinach.	Raspberries.
Parsnips.	Blackberries.
Vegetable soups.	Rhubarb.
Corn-meal preparations.	Jelly.
Salads of all sorts.	

Indigestible Articles.—The following articles, while they may be digested by a vigorous stomach, impair the digestive powers and induce indigestion, and are more of the character of poisons than foods to the dyspeptic:—

ANIMAL FOODS.

Pork.	Salt and smoked meats.
Veal.	Melted butter, and all animal fats.
Goose.	Mackerel, and all oily fish.
Liver.	Salt fish.
Kidney.	Dried and smoked fish.
Heart.	Sardines, and other fish preserved in oil.
Sausage.	Lobster, crabs, etc.
Hard-boiled eggs.	Cooked oysters and clams.
Scrambled eggs.	Fried meats of all sorts.
Cheese.	
Hashed and stewed meats.	

VEGETABLE FOODS.

Warm bread, especially when taken with butter.	Onions.
Muffins.	Mushrooms.
Buttered toast.	Pickles.
Pies, cakes, and all sorts of pastries.	Tea, coffee, cocoa, chocolate.
Pancakes. [try.	Mustard, pepper, spices, and other condiments.
Fried bread and vegetables.	Sugar, preserves, and all saccharine foods.
Nuts of all kinds.	

Practical Hints.—In addition to the above tables, which are based upon the observation of the effects of different articles of food on a large number of dyspeptics, the following practical suggestions may be made:—

1. The flesh of wild game is usually more easy of digestion than that of domestic animals, and is less likely to be diseased.

2. Fats are injurious to dyspeptics almost without exception. If eaten at all, butter is the only form admissible, and this should never be eaten cooked, but cold, on bread.

3. Broiling is the best mode of cooking meat.

4. "High" meat should never be eaten, as it has begun to decay.

5. Meat and vegetables do not agree well together.

6. Fruit and vegetables often disagree. Some cases must be required to discard vegetables altogether.

7. Milk does not agree well with either vegetables or fruits.

Specific Restrictions for Dyspeptics.—The different forms of dyspepsia require the observance of specific restrictions for each variety of the disorder, in addition to the general restrictions already made.

Slow Digestion is benefited by the two-meal plan of eating, as by this means the stomach is given more time for its work. Six or seven hours should intervene between the meals. The more nearly the

patient confines himself to articles included in the first table, the better progress he will make.

Acid Dyspepsia is aggravated by the use of starchy foods and those containing sugar. Vegetables must be discarded for a time. Sugar and all articles containing it must be wholly discarded. The idea many people have that sugar neutralizes acids, is quite a mistake. The grains can be taken better than other farinaceous foods. Often, fermented bread cannot be eaten without distress. Aerated bread, or light unleavened bread in the form of rolls, crisps, or crackers,* is much preferable. Toasting until crisp and slightly brown renders bread much less likely to sour. Fermented bread should never be eaten until it is a day or two old.

Diet for Bilious Dyspepsia.—In this form of indigestion, the greatest simplicity in diet is necessary. Complicated dishes, stews, etc., must be wholly interdicted. Pastry is practically synonymous with poison, for these patients. Fats, as butter, lard, etc., and fat meats, together with nuts and fruits containing oils, must be entirely discarded. Sweets of all sorts are about equally injurious. Many persons suffering with this form of dyspepsia can trace the cause of the attack to eating freely of sugar or sweetmeats.

Vegetables, being difficult of digestion, are very

* Recipes for this kind of bread and many other wholesome foods for dyspeptics will be found in a work by the author, entitled, "Healthful Cookery:" Good Health Pub. Co., Battle Creek, Mich.

productive of gas, and hence should be avoided by persons subject to bilious dyspepsia. Farinaceous foods, as oatmeal, wheat meal, rice, and ripe fruits, are adapted to this class of cases. Meat should be taken sparingly, and in many cases can be advantageously discarded altogether for a time.

Diet for Painful Dyspepsia.—Meat and all coarse vegetables must be carefully avoided in this affection. Preparations from the grains, as farina, corn-starch, well-boiled oatmeal porridge, and other farinaceous substances, as sago, tapioca, etc., agree best. It should be borne in mind, however, that in this class of cases such articles as cracked and crushed wheat, samp, graham bread, and other foods containing the coarser parts of the grain, are likely to do harm, the outside woody parts of the grain acting as a mechanical irritant to the sensitive mucous membrane of the stomach. It is this fact which has given seeming occasion for a class of ignorant individuals who have mercenary ends to serve, to declaim so loudly against the use of whole-wheat flour. The fact that the coarser parts of the grain can be removed with advantage for this class of cases, is no evidence against its utility in most other cases of indigestion.

In extremely bad cases, it is often necessary to put the patient on extremely simple diet. In cases of this sort, nothing generally answers the indications so well as milk. It should be taken fresh as possible, and should be given to the patient about

as warm as can be taken with comfort, unless there is considerable fever, when it may be taken in small quantities iced. In extreme cases, the irritability may be so great that the food will be rejected if taken in any considerable quantities. In these cases, it becomes necessary to take the food, milk by preference, in very small quantities, often repeated. If necessary, so small a quantity as one or two spoonfuls may be given once an hour at first, gradually increasing the quantity and the intervals, until the necessary quantity is taken at the usual intervals for meals. Then a little well-boiled and strained oatmeal or graham gruel may be added, the quantity being increased until the patient can bear semi-solid food. Many lives have been saved by this plan when death seemed imminent from inability to digest sufficient nourishment. In some cases, we have found even milk intolerable, and have then secured the most successful results by the use of the white of egg beaten to a froth, and made palatable by the addition of a few drops of lemon juice or wine.

In many cases of this form of dyspepsia, the patient feels a terrible faintness as soon as the stomach is empty of food, which is in some degree relieved by taking proper food. This often leads the patient to resort to frequent eating when there is no requirement for so doing, and with great detriment. The difficulty referred to occurs particularly before breakfast; and the unpleasant sensations

sometimes become so great that the appetite is destroyed. While the faintness described is not real hunger, it is best to relieve it sometimes by the taking of some simple food, or a little warm drink. When troublesome at night, the patient may take a few sips of warm milk; or if inconvenience is experienced from this, a little very weak hot lemonade may be taken. It should be made by pouring boiling water on a slice of lemon or a little lemon peel. Add very little sugar, better none at all. Drink after allowing it to stand a few minutes. A few sips of cold water will also relieve the difficulty in many cases. In the morning, a cup of warm drink may sometimes be taken an hour before breakfast.

Diet in Nervous Dyspepsia.—Nervous dyspeptics rarely complain of much difficulty with digestion, yet the most careful observance of strict dietetic rules is of great importance in this class of cases. The diet must be plain, unstimulating, but very nutritious. It is of special importance that the patient make a free use of the whole-grain preparations. Oatmeal is a specially good article of food, as are also graham and cracked wheat. Pepper, spice, mustard, and all other irritating condiments, must be scrupulously avoided. There is usually a slow digestion in these cases, and hence the suggestions made respecting that form of stomach disease also apply to this.

Mixed Cases.—It not infrequently happens that

cases of dyspepsia exhibit the symptoms which belong to two or more classes of the disease. In cases of this sort it is of course necessary to conform to the special indications so far as can be done. The most frequent combination is acid and painful dyspepsia. These cases are often very troublesome to manage. None but a careful, discerning physician is competent to successfully pilot safely out of his doubly perplexing difficulties such a sufferer as this; but sufficient care, patience, perseverance, and well-directed effort will secure certain success.

An Important Caution.—It is of great importance to recollect that the special directions for the diet in different forms of dyspepsia which we have given are not intended as rules to be followed for any great period of time. In many cases it is necessary to adhere strictly to the special dietary only for a few days, when the diet may by degrees be made to include a larger variety of foods. We would, however, impress upon the mind of the dyspeptic this fact; that when he finds himself well again, he must not make the error to suppose that the principle “once in grace always in grace” in any sense or in the smallest degree applies to the improved state of his digestion. Although the stomach may be restored to a sufficient degree of health and vigor to enable it to do its duty well *under favorable circumstances*, it will be certain to fail and relapse into a diseased state again as soon as those conditions are no longer supplied. The dyspeptic must

make up his mind to study carefully the laws of good digestion and apply them to his own case, not only as a means of recovering his health, but as an essential for keeping well when he has once recovered. When the stomach has once lost its natural healthy tone, it will never again bear the degree of abuse which it may have once endured for a considerable time before breaking down.

MEASURES OF TREATMENT.

In the treatment of this disease, attention to hygiene and the application of what are by some termed "hygienic remedies," are of first importance. Indeed, it is by these agents that nature is aided in her restorative work more than by any others, and upon these the most skillful and successful of those who have given great attention to the treatment of the functional diseases of the stomach find it safest to rely. Undoubtedly there are cases and circumstances which may be benefited, and the work of cure hastened, by the employment of medicinal agents; nevertheless we feel quite confident that the abuse of drugs is so very great, and has been the direct cause of so many bad cases of confirmed dyspepsia, that it would be far better to do without them altogether than to use them as they are not infrequently employed. An eminent writer on this subject, in referring to the treatment of dyspepsia says, "My main object in the treatment is to prevent the sufferers from resorting to drugs, which,

in such cases, not only produce their own morbid conditions, but also confirm those already existing.”*

The extensive and often habitual use of alkalies for acidity, of purgatives for constipation, nervines and opiates for sleeplessness, and after-dinner pills to goad into action the lagging stomach, has been a potent factor in the production of a large class of most inveterate dyspepsias. This kind of treatment for dyspepsia cannot be too much deplored, nor too often discouraged. Especially to be discountenanced is the wholesale employment of “liver pills,” “stomach tonics,” “anti-bilious pills,” “bit-ters,” and the whole genus of quack nostrums and proprietary drugs.

Another and still more weighty reason which we would offer for not having in this work recommended the use of medicinal agents is that this class of remedies, if beneficial under any circumstances, can be judiciously used only by one who is wholly conversant with the varied properties and effects of the remedy used, and hence will be likely to be properly employed only by the judicious and skillful physician, for whom this book is not so much intended as for the poor dyspeptic himself who wants to explore the mysteries of his disease, and learn to escape from future suffering by obedience to nature’s laws.

Exercise.—This is of first importance as a general renovator of vital action. The secretion of gas-

* Chambers.

tric juice is, under ordinary circumstances, proportionate to the amount of nourishment which the system is prepared to assimilate. Exercise creates a demand for food, and so stimulates both assimilation and secretion. The best forms of exercise are those which will secure the most uniform activity of the several parts of the muscular system. Riding, walking, rowing, and especially horseback riding, are to be recommended as excellent. Gymnastic exercises and the judicious use of the "health lift" are also good, and for persons who from lack of time, or other cause, cannot adopt the other methods, these may be considered as almost indispensable. Such exercises as running, jumping, baseball playing, "walking matches," and other violent exercises, cannot be recommended. Trapeze exercises must also be discountenanced on the same grounds. Agriculture, especially the raising of small fruits and the cultivation of flowers, cannot be too highly recommended as forms of exercise for dyspeptic patients. For that large class of sallowskinned, weak-backed, dyspeptic young ladies who have been made dyspeptics by idleness and too much "coddling" by fond mothers who sacrifice themselves to the monotonous drudgery of the cook-stove and the sewing-machine and their daughters to sentimental idleness and fashionable piano-thrumming,—for the indigestion of these poor victims of mistaken maternal care, the varied exercise necessitated by domestic labor is a most

admirable panacea. And for the gaunt, hollow-cheeked, sunken-eyed, slab-sided, cigar-worshipping young man whose chief occupation is cultivating a mustache, smoking cigarettes, and swinging a gold-headed cane, a little wholesome experience in earning a subsistence by the sweat of the brow, instead of leaning upon rich relatives, will prove a specific for "softening," which begins in the brain and extends to every part of the system.

Exercise before breakfast, while excellent for some, cannot be too much condemned for others. Persons who suffer with "goneness," "faintness," "sinking," and allied pains when the stomach is empty, and especially in the morning, must avoid exercise to any considerable extent before eating. Disregard of this rule occasions loss of appetite and weakening of digestion. Persons who are very weak must also avoid exercise before eating in the morning.

As before remarked, only gentle exercise can be taken soon after eating, or immediately before, without injury. Persons who feel a constant "sinking" or weakness in the stomach and bowels will derive benefit from wearing about the body a broad band of flannel.

Sleeping.—It is of great importance that sufficient sleep be obtained, though sometimes this seems impossible on account of the nervousness occasioned by this disease. It is generally best to retire early, but there is no virtue in getting up in the morning

at an early hour unless the body is recuperated by rest. Sleep must be obtained, and on many accounts it is better to take it in the fore part of the night; but if not secured then, it should be taken at other times. Sleeplessness induced by anxiety is often a cause of dyspepsia. It is a great obstacle in the way of successful treatment.

Traveling.—Many physicians are in the habit of recommending patients upon whom they have exhausted their skill, to seek health by traveling. Thousands annually leave their homes and at great expense visit various watering places, mineral springs, etc., in this country and Europe, in consequence of this advice. Some return much benefited; the majority are no better except from rest. This is due to the fact that traveling does not remove the real cause of the difficulty, and may often increase it. In general, while traveling it is next to impossible to secure either regularity of diet or other habits, or a proper quality of food. This, of course, in great degree counteracts the benefit to be derived from gentle exercise and freedom from care.

The advantage of special climates is undoubtedly overrated in a very great degree, though a cool climate may generally be considered as best, especially for those suffering with "bilious dyspepsia." With nervous dyspeptics, a warm climate seems to agree better, as it occasions less disturbance of the circulation.

Mental and Moral Treatment.—This is too impor-

tant a part of a successful plan of treatment to be neglected. The gloomy despondency must be steadily combated by a determination to be cheerful. The disposition to fret and worry, and to dwell upon the unpleasant or painful features of the disease, must be fought against with firmness and resolution. The dyspeptic who allows his mind to constantly dwell upon his stomach, and who speculates upon the probabilities respecting the digestion of each morsel of food as he swallows it, will be certain to remain a dyspeptic. This unfortunate tendency on the part of dyspeptics is a great impediment to recovery in many cases. The mind must be diverted from self as much as possible at all times, and especially while eating. The habit many dyspeptics have of talking constantly about themselves, sometimes amounting almost to a monomania, cannot be too strongly condemned. Too great solicitude about the stomach, diet, etc., is worse than none at all.

Dress.—In addition to wearing the clothing loose, so as to give every organ perfect freedom of action, it is of greatest importance that the extremities be kept thoroughly warm. Cold hands and feet are very common with dyspeptics. It will generally be found necessary to wear flannel undergarments throughout the year, graduating the thickness to the temperature. It will sometimes be necessary to change the clothing once or twice a day to accomplish this in extreme cases of disturbed circula-

tion. Additional suggestions with reference to coldness of the extremities will be given under that head presently.

General Measures of Treatment.—The general indications for treatment are, 1. To increase the general vigor of the system by tonic remedies; 2. To balance the circulation; 3. To increase the demand for food, and thereby improve the quantity and quality of the digestive juices. This can be best accomplished by the following means:—

Baths.—Water baths are of course useful to keep the skin free from impurities and to increase its activity. Too frequent bathing, however, will be found harmful, as will also, in most cases, bathing in cold water, especially in the morning, before breakfast. The latter practice has been much recommended, and has been employed by many. We have heard people boast of having taken a cold shower-bath every morning, summer and winter, for years. Some even went so far as to claim to find enjoyment in springing out of bed on a winter morning before day-break and after running a few rods, with no protection from the frosty air and snow, taking a plunge in a lake or stream through a hole cut in the ice for the purpose. Hundreds have been greatly injured by such foolish practices. A person in pretty good flesh may take with advantage a hand bath with tepid water, every morning upon rising. But the average dyspeptic will not do well to bathe so often. Two or three times a

week are enough in summer, and half as frequently in winter.

For those who are quite gross, with inactive skins, sluggish livers and bowels, there is nothing better than the Turkish bath when given with discretion. This is one of the most active stimulants to activity of the skin which can be employed. The vapor and Russian bath, and the wet-sheet pack, rank next in value. These measures must not be employed too frequently, however, as they are powerful depletents when injudiciously used, though most energetic vital stimulants if properly employed.

The tepid or cool spray is also a valuable remedy used prudently. Sea bathing, so much lauded, is often overdone. If the patient is chilled in taking the bath, it is decidedly harmful.

The vigorous rubbing and manipulation of the skin and muscles which properly follow the baths referred to, are as beneficial as the baths themselves, and are especially needful to secure a good reaction.

Inunction.—To encourage the surface circulation, the oil bath, or inunction, is a most admirable remedy. It is especially serviceable in cases in which there is dryness of the skin. Under the influence of inunctions of fine olive-oil, vaseline, or refined cocoa-nut oil, applied one to three times a week, the skin grows moist, supple, and warm, and the patient will usually increase in weight as well as improve in color and in general vigor. In weakly patients who are unable to take sufficient exercise,

this remedy is of great value, especially when coupled with massage, a system of rubbing which in some cases secures surprising results. Simple dry-hand rubbing morning and night is useful, and often seems to benefit the patient more than anything else that can be done.

Water-Drinking.—In cases of obstinate constipation, due to inactivity of the liver, water-drinking is of advantage, when the stomach will bear it. The quantity of water to be taken must vary from a single glassful taken before breakfast to a half-dozen glasses a day in the intervals between the meals. Repeated experiments by the most eminent physiologists have shown that the liberal use of water as a beverage is a great promoter of vital activity, not only of the liver, but of other vital organs. This must not be carried to excess, and must be discontinued if it disturbs digestion.

SPECIAL MEASURES OF TREATMENT.

The special indications to be met by treatment in dyspepsia are, 1. To increase the quantity and quality of the gastric juice, and of the other digestive fluids; 2. To increase the muscular activity of the stomach and bowels; 3. To palliate the various other symptoms which grow out of derangements of these two important functions. First, we will call attention to

Measures to Improve the Secretions.—Any meas-

ure which will improve the tone of the stomach will accomplish this result. We may mention, as useful for this purpose,

1. Taking a few sips of cold or hot water just before eating. Not more than one or two table-spoonfuls should be taken. The same quantity of very warm water taken an hour after the meal has a similar effect.

2. The application of hot fomentations to the pit of the stomach stimulates the activity of the gastric glands. Alternate hot and cold applications made to the portion of the spine just back of the stomach has a similar effect, and often in a remarkable degree. In some of the worst cases a fomentation applied a half-hour after each meal will have a most decidedly beneficial effect. The alternate hot and cold spray or douche may be employed instead of fomentations and compresses, and with greater benefit in some cases. The application should be at quite extreme temperatures, and alternated every few seconds. It should not be continued more than two or three minutes. Care must be taken to avoid chilling the patient. If the douche cannot be employed, an alternate hot and cold rubbing may be substituted, applying the heat and cold with cloths wrung out of hot and cold water alternately.*

* Directions for all kinds of water treatment may be found in a work entitled, "Uses of Water:" Good Health Pub. Co., Battle Creek, Mich.

3. In slow digestion the application of fomentations night and morning, and wearing a warm abdominal compress through the night, or for a few hours after each meal, are measures of very great utility. Moist warmth applied to the surface is a powerful stimulant of secretion in the stomach, as well as in the liver and other secreting organs.

Measures to Increase Muscular Action.—The measures just described are equally useful in exciting muscular activity. In addition may be mentioned gentle manipulation of the bowels, or kneading of the abdomen, especially its upper portion. By this means the local circulation is stimulated, and the natural muscular action of the bowels is both imitated and encouraged. This is an excellent remedy, and can be employed to advantage each night and morning, and for half an hour or more after each meal.

If the patient is able, he should himself make a practice of kneading and percussing the abdomen for fifteen or twenty minutes night and morning. This is a powerful stimulus of muscular activity. Many years ago a quack doctor in New York City made a fortune by curing dyspeptics with this mode alone. He put every patient under an oath of secrecy, and required certain wholesome restrictions of diet, which of course aided in the cure.

Flatulence.—Stomach flatulence, occasioned by the formation of carbonic acid gas, may usually be relieved by swallowing a small quantity of quite hot

water and applying hot fomentations to the stomach with gentle kneading. A little camphor, peppermint, or winter-green added to the hot water increases its efficiency. Sometimes gulping a small quantity of air will liberate the imprisoned gas by causing relaxation of the muscular fibers at the lower end of the œsophagus. Flatulence of the bowels, together with the pain which sometimes accompanies it, is relieved in the same way. Occasionally a hot sitz bath for ten or fifteen minutes, at 100° to 110°, is required. A copious warm enema will be required in some cases which are accompanied by obstinate constipation.

Acidity.—One of the best remedies for acidity, and one which is likely to do no harm while it does much good, is pulverized charcoal. It must be very finely pulverized, being sifted through a cloth, must be of the best quality, and fresh. That made of boxwood or cocoa-nut shells is best. It may be taken in powder, in doses of a half teaspoonful, with water; but the dry powder, taken in capsules, is best. Charcoal may be combined with the food in crackers, rolls, biscuit, and other articles; and when thus used is often very efficient in preventing sourness; but its value is greatly lessened by mixture with other substances. When old it is almost valueless. As large a quantity as two or three ounces has been taken after a meal without injury.

Heart-burn may be treated as directed for acidity.

Vomiting.—When present, this symptom is some-

times very troublesome. If there is evidence from other symptoms that there is something in the stomach which needs to be expelled, the efforts of nature should be encouraged by copious draughts of tepid or milk-warm water, which will lessen the painful retching, as well as secure thorough emptying of the stomach. When the matters vomited give no evidence of sourness or decomposition, and the symptom is evidently due to nervous conditions or to an irritable state of the stomach, a few sips of hot water will usually afford relief, especially if coupled with a hot fomentation over the stomach. In cases which are not thus relieved, ice pills, or small sips of ice water, with cold to the stomach and warm to the spine, will almost always succeed. In bilious vomiting, when the matters vomited are of a green color, mild acids, as lemon or lime juice, will be found excellent, sometimes giving almost instant relief. The same remedies recommended as palliatives of vomiting are the proper remedies for nausea.

Constipation.—Inactivity of the bowels is often one of the most troublesome difficulties with which the dyspeptic has to contend. Two of its most potent causes we have not before mentioned, but call attention to them here as they have an important bearing on treatment; viz., the use of purgatives, and carelessness respecting the observance of the calls of nature. The latter cause is especially common with women, particularly those who reside in

the country, where accommodations for the purpose are by no means so convenient as in the larger cities, where sewers and indoor conveniences are almost universal. With most people, the bowels naturally move in the morning, before or just after breakfast. If the duty is neglected when it should be performed, the bowels become in some degree tolerant of their contents, so that the call is less vigorous; and the neglected organs may become so dormant that they may cease to demand relief. The most obstinate cases of constipation are produced in this way.

When purgatives are resorted to, the difficulty becomes still worse. Goaded to activity for the time being when stimulated by a cathartic, they relapse into worse torpidity when the influence of the excitant has been removed. This demands a renewal of the laxative, and so the evil is perpetuated. Cases of this sort have come under our care in which there had been no natural movement of the bowels for twenty years, laxatives of some sort having been employed during the whole time. For the relief of this condition we offer the following suggestions:—

1. Drink a glass of cold water upon rising in the morning, unless the condition of the stomach is such as to forbid the taking of much fluid. This one practice has cured some of the worst cases of constipation, which had resisted many other modes of treatment.

2. Eat food of sufficient coarseness to afford the necessary bulk for the bowels to act upon. Graham bread, oatmeal, and cracked wheat are excellent remedies, as well as foods, in such cases. Concentrated foods must be sedulously avoided, together with any excess of fat, as the latter article diminishes the biliary secretion, which is the natural regulator of the bowels.

3. Apply the same remedies as are recommended for deficient muscular activity of the stomach and bowels. The abdominal bandage worn each night, and also in the day-time for a while at first in bad cases, is one of the best measures of treatment. Kneading and percussing the abdomen is a very useful measure, and should be practiced regularly.

4. In cases in which purgatives have been employed for a long time, the enema will be found necessary at first; but if it is used at a regular hour, and an effort is first made to secure a natural movement each time, it will not require very long to secure a natural activity of the organs.

One of the most painful consequences of constipation is the production of hemorrhoidal tumors or piles at or near the outlet of the rectum. The obstruction to the circulation in the bowels causes dilatation of the veins of the rectum, which become greatly distended, with thickened walls, giving rise to a great degree of irritation and often hemorrhage. Palliative measures of various sorts may mitigate the severity of the symptoms, but in most cases a cure can be effected only by a surgical operation.

Cold Feet, etc.—To cure cold feet, do not toast them at the fire, nor parboil them in hot water. This only relaxes and weakens their circulation. A better plan is this: Just before going to bed, place the feet in a cold bath, with the water about one-fourth of an inch deep. In a few minutes, dry and rub warm with a coarse cloth or with the hand. The alternate hot and cold foot bath may be used with still greater effectiveness. At night, if the feet cannot be kept warm without, hot jugs or foot-stones may be employed; but it is far better to become independent altogether of such artificial substitutes for vital heat.

When the feet or hands are too hot, they may be cooled by using cold water instead of hot. Ice-water may be employed when necessary, and will be found a most excellent means of relieving the unpleasant burning from which many people, especially older persons, often suffer so much.

Sleeplessness.—This most annoying and exhausting symptom may be greatly relieved by attention to the following suggestions:—

1. Retire early, having taken, an hour or so before, sufficient muscular exercise to induce slight weariness.

2. Eat nothing within four hours of bed-time. If "faint" at the stomach, drink half a glass of hot lemonade, made as already directed. If this does not suffice, a mellow sweet or subacid apple may be taken an hour before retiring, unless fruit occasions pain or acidity.

3. If feverish, the skin being hot and dry, take a light hand bath with tepid water upon retiring.

4. If troubled with cold feet and hands, employ the means suggested for the cure of cold feet.

5. Sleep in a cool room, but take care to see that the bedding is well aired and dry, and the room well ventilated.

6. When nervousness causes loss of sleep, there are various methods of inducing slumber, one of the most efficient being slow, deep, and steady breathing. By this means the lungs are filled with blood, and the brain is thus relieved of the congestion which causes wakefulness.

Hints for the removal of other bad conditions have been incidentally made in the consideration of other parts of the subject, and so do not need further attention here. To attempt to describe, and prescribe for, all of these morbid states would be beyond the province of this work; and we now leave the subject to the candid consideration of all who may be suffering from this most unpleasant malady.

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
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
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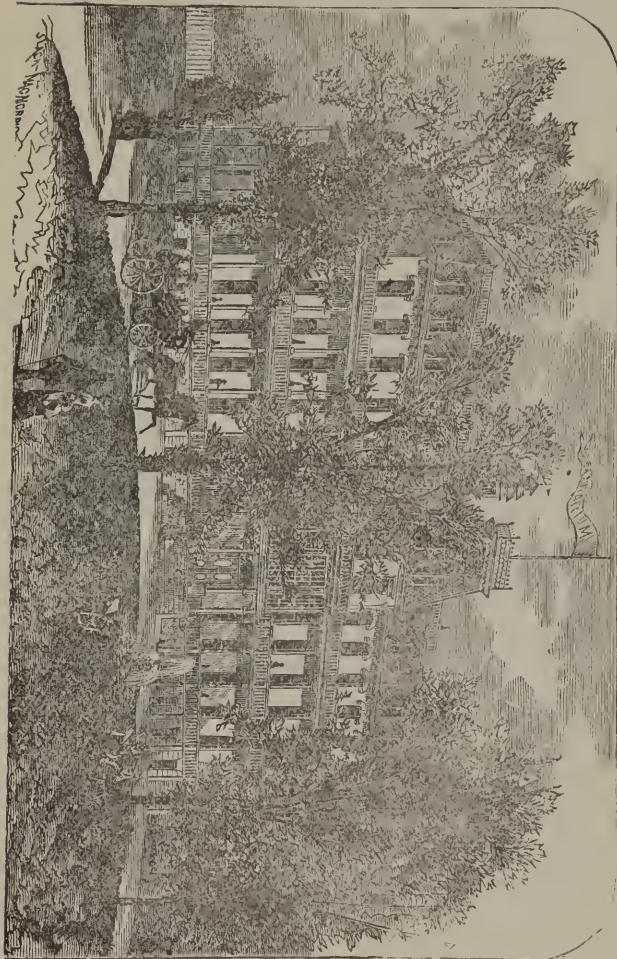
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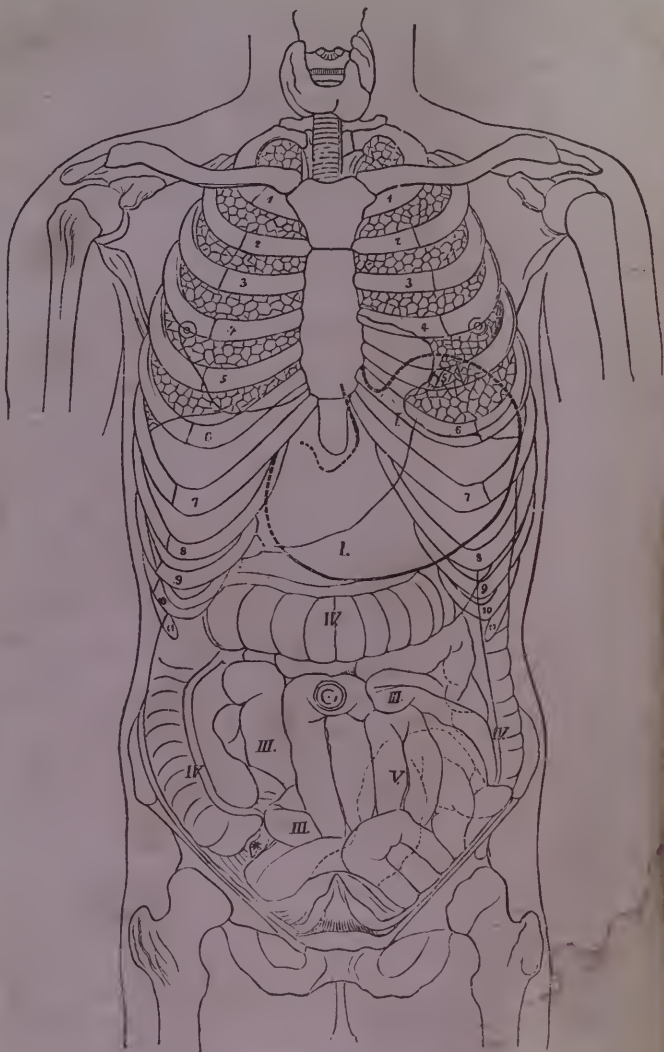
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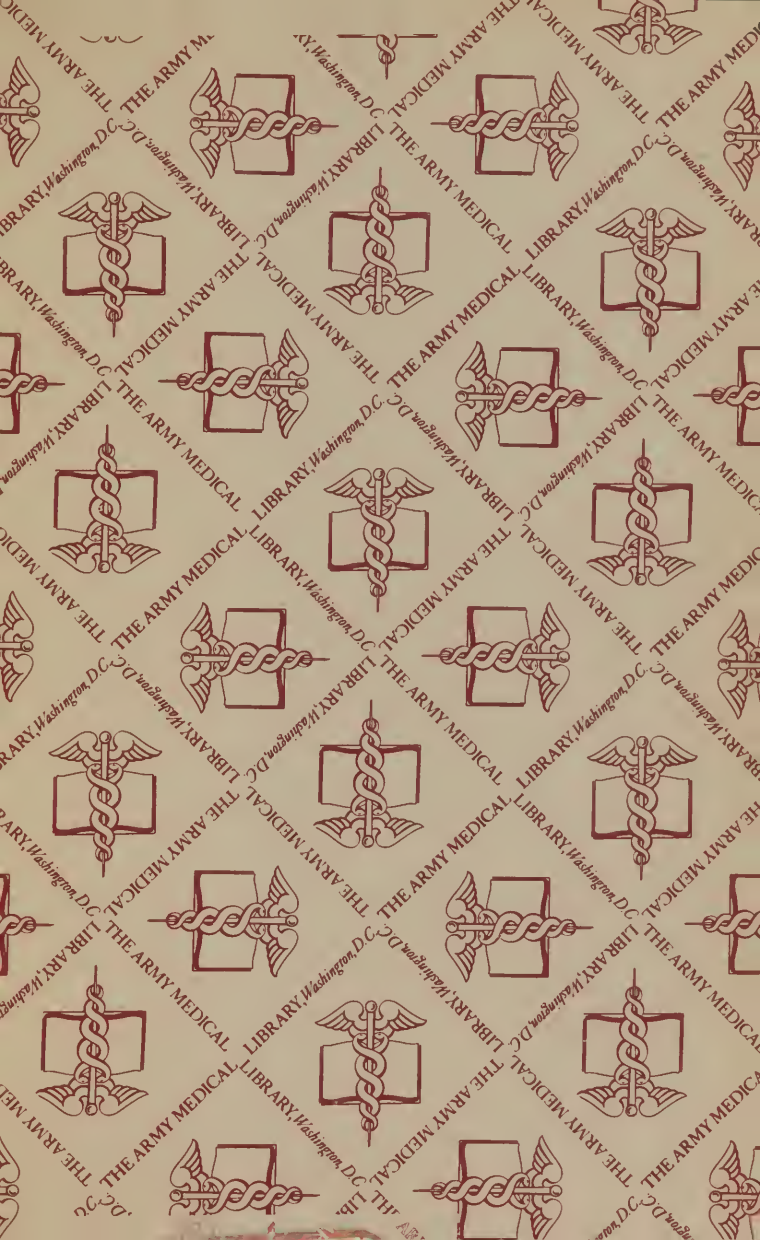
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